

ABSTRACT OF THE DISCLOSURE

Local concentration of accessing loads on a data buffer during data cell reading is reduced. Also, by providing sufficient time for a data cell reading operation with respect to data cell transmission timing, transmission rate fluctuation of CBR data cells in a transmitting side is reduced. When transmission of a new data stream is added, controller in a cell control unit refers to a transmitted data cell count of VC information processed through a slot immediately before. The controller determines whether a data cell transmitted through the slot immediately before is a head portion of a packet or not. If the data cell transmitted through the slot immediately before is the head portion of the packet, the controller only adds the VC information of the data stream to a shaper link list, and withholds transmission of the data cell. On the other hand, if the data cell transmitted through the slot immediately before is not the head portion of the packet, then the controller adds the VC information of the data stream, and transmits the data cell.